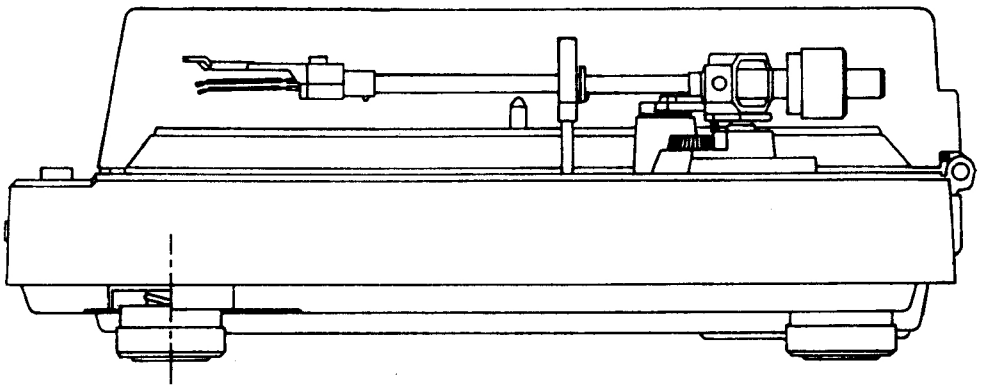
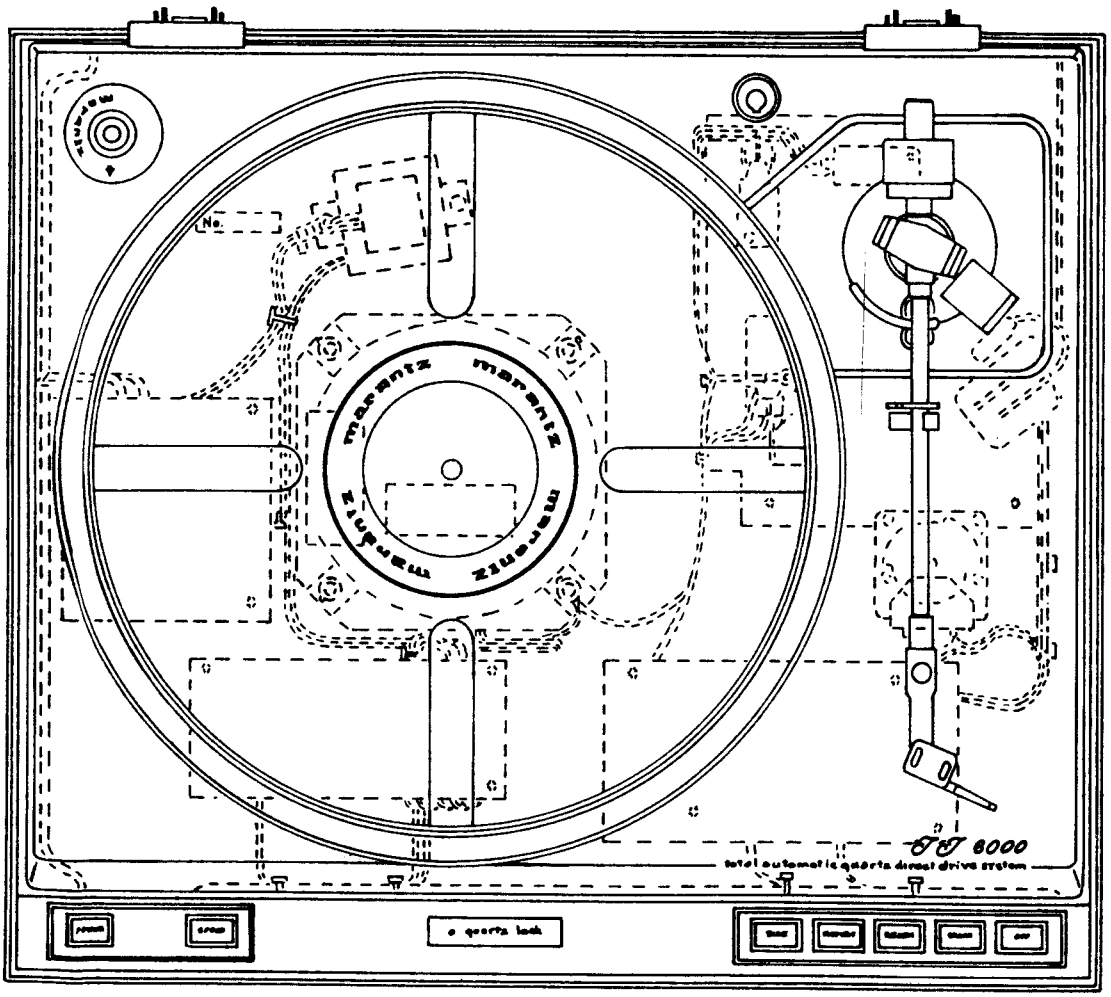
marantz®

TT-6000

service
manual





TT-6000

Superscope
Technical
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MARANTZ DESIGN AND SERVICE

Using superior design and selected high grade components, MARANTZ Company has created the ultimate in stereo soun Only original MARANTZ parts can insure that your MARANTZ product will continue to perform to the specifications f which it is famous.

Parts for your MARANTZ stereo are generally available within 72 hours throughout the nation via a toll-free line to o National Parts Depot in California. The sales professionals who take your call immediately refer to their own desk top co puter terminal and can quickly determine the availability and price information you require. If, for some reason, your ord should exceed our available stock, we usually can instantly provide an alternate replacement part or current delivery inf mation. When the order is placed and confirmed, the computer simultaneously generates "hard copy" orders at the distrib tion center. As hard copies come directly from the computer to the national parts depot, your requested stock is assembl and prepared for shipment and placed on the first available carrier for delivery to you.

ORDERING PARTS

Phone orders will eliminate mail delays, and we encourage the use of this method. If you order by mail, use MARANTZ pa order forms which are available from our National Parts Depot located at the following address:

SUPERSCOPE NATIONAL PARTS DEPARTMENT
20525 Nordhoff Street
Chatsworth, California 91311
Phone: 1-800-423-5108
1-213-998-9333

The following information must be supplied to eliminate delays in processing your order:

1. Complete address.
2. Complete part numbers.
3. Complete description of parts.
4. Model number for which part is required (indicate MARANTZ).
5. Account number (for account customers only).

Direct consumers will be provided with the current retail price quotation on available parts in order to advise them of the c of the parts and shipping.

OVERSEAS PARTS ORDERING

Parts may also be ordered from the following overseas addresses:

CANADA

Superscope Canada, Ltd.
3710 Nashua Drive
Mississauga
Ontario, Canada L4V1M5

AUSTRALIA

Superscope (Australasia) Pty., Ltd.
32 Cross Street (P.O. Box 604)
Brookvale 2100 N.S.W.
Australia

JAPAN

Marantz Japan, Inc
3622 Kamitsuruma
Sagamihara Shi
Kanagawa, Japan

EUROPE

Superscope Europe, S.A.
Avenue Leopold III, 2
7120 Peronnes-Lez-Binche
Belgium

Marantz France
Rue Louis Armand 9
92600 Asnieres
Hauts-de-Seine
France

Marantz Audio U.K. Ltd
London Road, 203
Staines
Middlesex
England

Superscope GmbH
Max-Planck-Strasse 2
D-6072 Dreieich 1
West Germany

All of the above locations are fully equipped to take care of your total service needs. Because various countries have differ configuration requirements, it is necessary that you contact the service facility in your particular country. In the event th there is no service location listed for your country, please contact the nearest facility for the necessary assistance.

INTRODUCTION

This service manual was prepared for use by Authorized Warranty Stations and contains service information for a Marantz Semi-Automatic Quartz Lock TT-6000 Turntable. Service information and voltage data included in this manual are intended to be used by experienced service technicians, knowledgeable in Turntable designs and Service. All instructions should be read and no attempt to repair the circuits or mechanisms should be made until complete operation is understood.

The parts list in this manual pertains to five different areas. Be sure that part numbers for your respective area are correct before parts orders are placed. A simple description is provided for parts which can be purchased locally or through the Marantz Parts Facilities. Refer to the Marantz Design and Service Section of this manual for correct parts ordering methods.

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ALIGNMENT ADJUSTMENTS

This service manual was prepared for qualified technicians familiar with turntable maintenance and alignment procedure. Review complete adjustment sections before proceeding.

CARTRIDGE WIRE COLOR CODE

Before installing a cartridge to the headshell, the wires should be connected to the cartridge. The cartridge or its technical sheet will identify the connection pins. It may be necessary to slightly compress the terminal clips on the headshell wires with your fingers to firm the contact area to the pins. Below is the headshell color description.

HEADSHELL WIRES:

Right Channel Hot . . . . . Red
Right Channel Ground . . . . . Green
Left Channel Hot . . . . . White
Left Channel Ground . . . . . Blue

After wire connections are made, install the cartridge mounting screws, provided with the cartridge, through the mounting slots and tighten firmly enough to hold the cartridge in place. Final adjustments are made after the overhang dimensions is adjusted.

A. STYLUS OVERHANG ADJUSTMENT

A 45RPM adaptor is supplied with the TT-6000 turntable that will be used for adjusting the overhang dimension, An arrow is marked on the 45RPM adaptor, and a gradient scale from 11 through 18.

1. Place the adaptor on the spindle with the arrow pointing towards the rear of the turntable. The gradient scale will be in the lower left quadrant when viewed from the front.
2. Remove stylus protective cover and balance the tone arm. Place the tone arm to the gradient scale and set stylus contact to gradient 17mm on the 45RPM adaptor. Set the cartridge screws after checking that the cartridge is parallel to the sides of the headshell.

B. STYLUS TRACKING FORCE ADJUSTMENT

1. Remove the stylus protective cover and adjust the counterweight until the tone arm is capable of being suspended in midair without movement.
2. Set the counterweight dial to zero.
3. Rotate the counterweight towards the pivot point to the manufacturer's specified cartridge tracking force.
4. Adjust the anti-skate control to the same amount of force as the stylus tracking force.

TONE ARM TRAVEL ADJUSTMENT

Changing the angle of the feed arm assemble determines the speed of the tone arm travel.

NOTE:
Care must be excercised to maintain clearance between the feed arm assembly and the friction rubber. Refer to Figure 1.

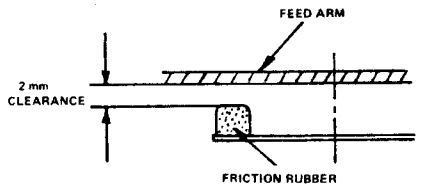


FIGURE 1

Moving the Feed Arm Assembly clockwise, when viewed from bottom of the turntable, slows the tone arm return and counter-clockwise will speed the return travel. Loosen the hexagon set screw on the feed arm assy (Refer to Figure 2) and turn feed arm assy in increments of a few degrees either clock-wise (slow), counter-clockwise (fast) until desired travel speed is set. Re-tighten set screw after checking clearance between the feed arm assy and the friction rubber (2mm).

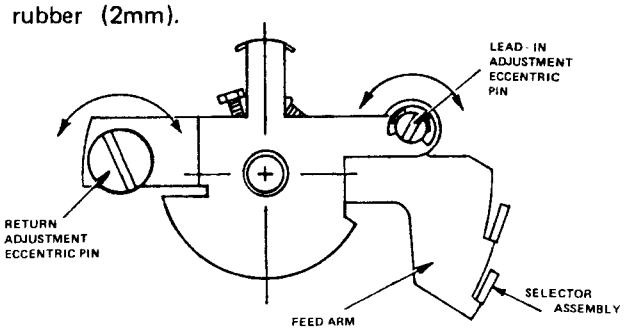


FIGURE 2

PHOTO CELL DETECTION CIRCUIT

Install the tone arm in its rest clip and turn the turntable on. Select 33RPM MODE. Adjust voltages below in the Photo Cell Detection circuit

VR1-D.C. Voltage between Pins 9 and 10-0.2VDC
VR2-D.C. Voltage between Pins 9 and 11-0.65VDC

After the tone arm travel and photo cell detection circuit is adjusted then the eccentric pins on the feed arm assy can be used for fine adjustment. The return eccentric pin will adjust the tone-arm speed return while the Lead-in eccentric pin will position the tone arm during lead in to the disc.

LEAD IN ADJUSTMENT

Adjust disc lead-in dimension by turning the lead-in eccentric pin on the feed arm assembly.

Turn eccentric pin clockwise to adjust tone arm away from the disc and turn counter clockwise to move the tone arm toward the disc.

ELEVATION PLATE ADJUSTMENT

Cueing elevation of the tone arm is adjusted by the cueing nut located in the cueing lift shaft on the top of the turntable. Turning the cue nut clockwise (viewed from the top of the turntable) lowers the cueing elevation height and counter-clockwise increases the elevation height of the cueing arm.

ELECTRONIC ADJUSTMENTS

Follow alignment sequence for electronic adjustments below.

A. Supply Voltage Verification
B. Phase Lock Alignment
C. Wow and Flutter Alignment

SUPPLY VOLTAGE

Connect a digital voltmeter to Power Supply Board Pins and verify DC voltages.

A. Pin 17-(Ground) C. Pin 15-(−12VDC)
B. Pin 20-(+12VDC) D. Pin 14-(+5VDC)

PHASE LOCK ALIGNMENT

A. Adjust crystal oscillator VC1 trimmer by monitoring (Pin 13) IC-3 for:
   33RPM - 22500 ± 2 Micro-Secs (44.44Hz)
   45RPM - 16666 ± 2 Micro-Secs (60.00Hz)

B. Connect a dual trace scope to (Pin 13) IC-3 and (T.P.) collector X1. Superimpose wave forms and adjust VR4 and VR5. Refer to Figures below.
   33RPM - 14.0 ± 0.4 M Secs. with VR4
   45RPM - 11.0 ± 0.4 M Secs. with VR5

WOW AND FLUTTER ALIGNMENT

It is recommended to align wow and flutter circuit by both methods (meter alignment), (scope alignment) below.

WOW AND FLUTTER METER ALIGNMENT

A. Connect a wow/flutter meter to the amplifier output and adjust VR1-Motor Control Circuit Board for minimum reading.

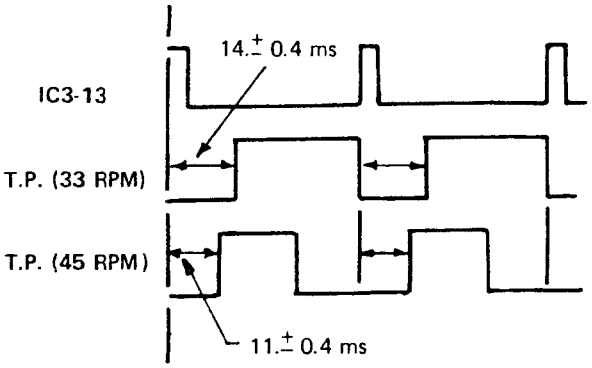
B. Adjust VR2 and VR3-Motor Control Circuit Board alternately to minimize flutter.

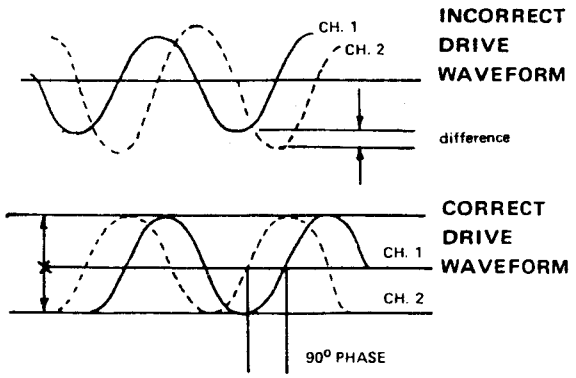
WOW AND FLUTTER SCOPE ALIGNMENT

A. Connect a dual trace scope (Pins 3, 8 Motor Control Circuit Board) and superimpose wave forms. Reference Figures below.

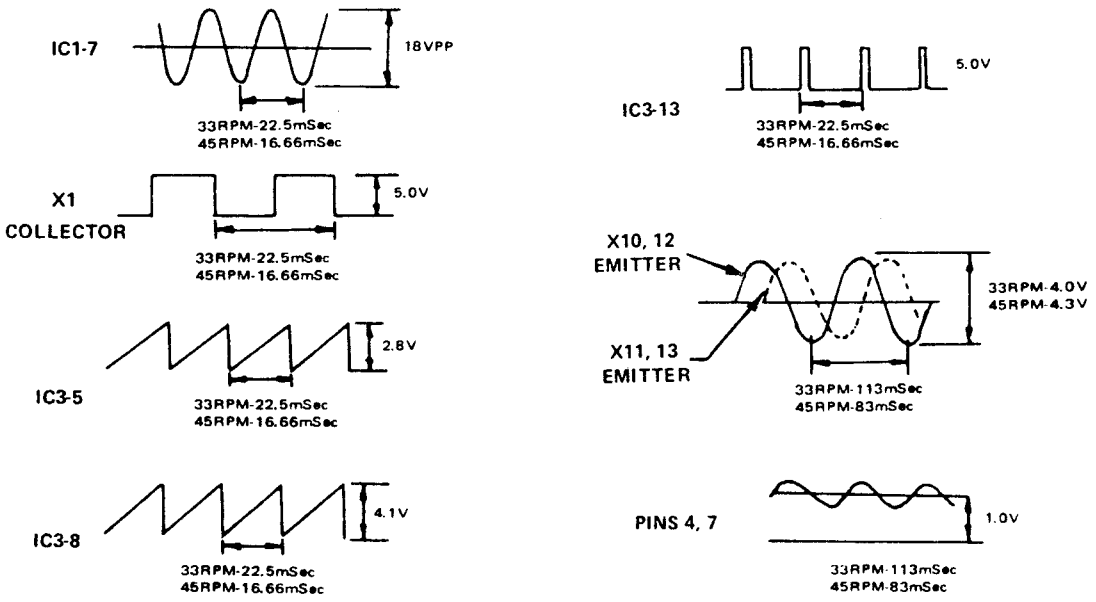
B. Adjust VR1 for amplitude and VR3 and VR4 for 90° phase difference.

NOTE: The Turntable must be level for all wow and Flutter adjustments.



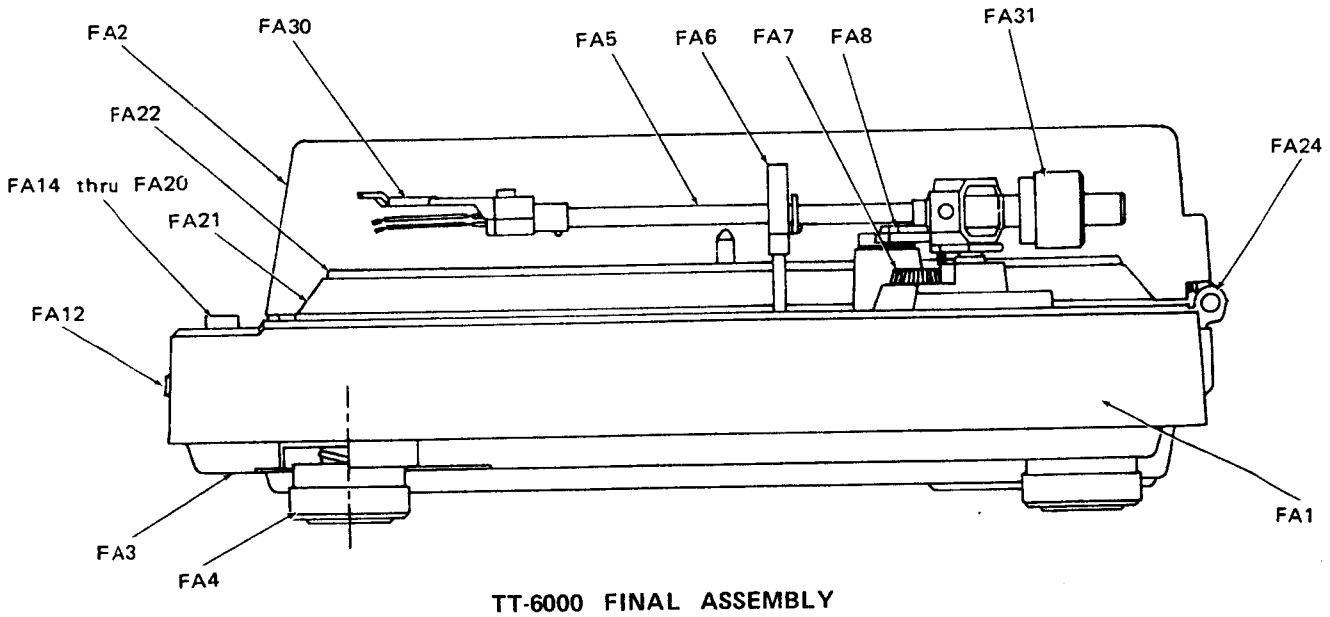


CIRCUIT WAVEFORMS

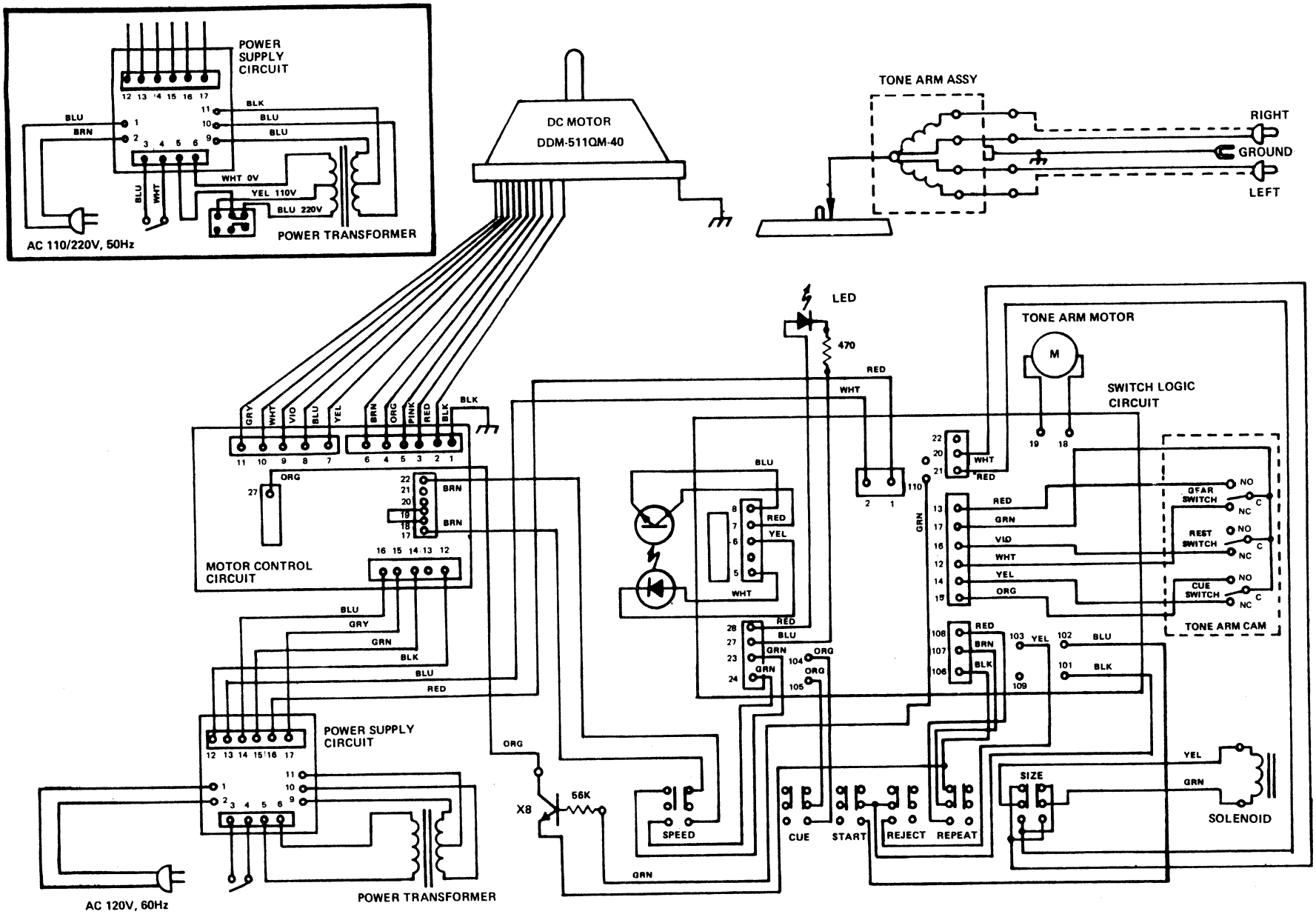


TT-6000 TROUBLE SHOOTING CHART

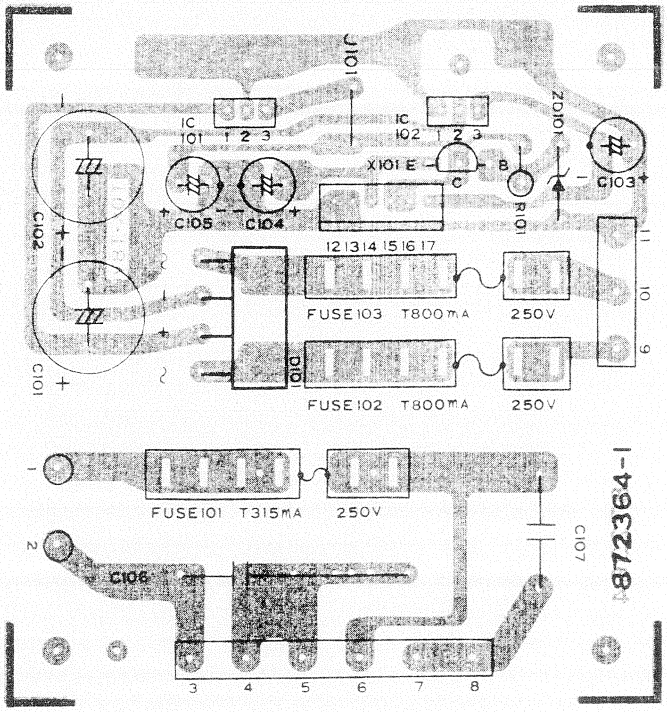
PROBLEM	SUSPECTED AREA	TASK
Stylus Remains in One Groove	1. Stylus Tracking Force 2. Tone Arm Lead Wire Binding 3. Anti-Skate Mechanism	1. Verify Tone Arm Balance 2. Re-Arrange Lead Wires 3. Check Anti-Skate Cam
Tone Arm Does Not Aavance to Record Position	1. Selector Feed Arm Assy	1. Mis-Adjusted Lead-in Eccentric Pin
Tone Arm Does Not Return After Record End	1. Selector Feed Arm Assy 2. VR1, VR2 Photo Cell Ckt	1. Mis-Adjusted Feed Arm Assy 1a. Mis-Adjusted Return-Eccentric Pin 2. Verify Correct Adjustment
Cueing Mechanism Height Does Not Clear Record	1. Elevation Arm Low/High	1. Mis-Adjusted Elevation Nut for Plate Height
Speed Varies (Wow/Flutter)	1. Turntable Not Level 2. Circuit IC3 3. VR4, VR5	1. Verify Level Surface 2. Verify Correct Voltages 3. Verify Pulse Widths Re-Adjust if Necessary
Intermittent Motor	1. Intermittent Fuse-Wiring 2. Intermittent Speed Selector Switch	1. Check for Loose Wires or Fuse Sockets P.S. 2. Clean/Replace Switch
Tone Arm Returns But Platter Remains on	1. Micro-Switch	1. Adjust Micro-Switch 2. Loose Micro-Switch Adjust and Re-Tighten
Reject Button Depressed But Tone-Arm does not Return	1. Reject Switch Contact 2. Switching Circuit 3. Tone Arm Motor	1. Clean Contacts 2. Verify Flip-Flop Levels 3. Verify Correct Motor Action
Start Button Depressed but no Motor Start	1. Power Supply 2. Feed Arm Advance 3. Start Button	1. Check D.C. Voltages 2. Re-Align Arm Assembly 3. Clean Contacts



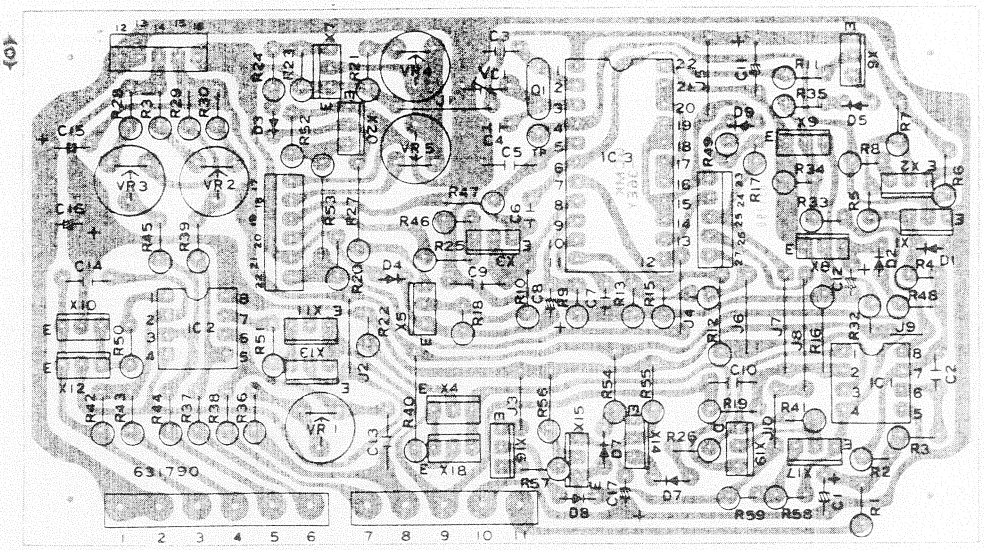
TT-6000 FINAL ASSEMBLY



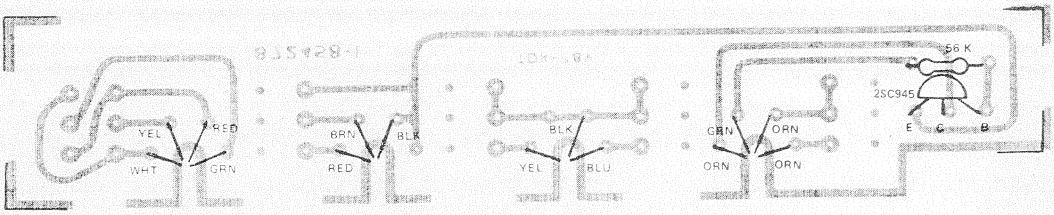
TT-6000 WIRING DIAGRAM



POWER SUPPLY CIRCUIT BOARD



MOTOR CONTROL CIRCUIT BOARD



SWITCH CIRCUIT BOARD

VOLTAGE MEASUREMENTS

SWITCH LOGIC BOARD							
PIN NO.	IC1	IC2	IC3	IC4	IC5	IC6	IC7
1	3.74V	3.9V	5.02V	5.02V	3.73V	4.94V	0.01V
2	5.0V	5.0V	5.02V	0.11V	3.73V	0.02V	4.94V
3	4.74V	4.74V	0.11V	4.84V	0.09V	3.86V	4.15V
4	5.02V	5.02V	0.01V	4.84V	0.09V	3.86V	0.01V
5	0.08V	0.11V	0.12V	3.89V	0.01V	3.86V	0.01V
6	5.0V	5.0V	3.89V	0.11V	3.89V	0.11V	1.91V
7	0.00V	0.00V	0.01V	0.01V	0.01V	0.01V	11.75V
8	0.09V	4.98V	3.89V	0.11V	3.91V	0.11V	11.75V
9	5.0V	0.11V	4.94V	5.03V	0.09V	4.84V	
10	5.0V	5.0V	0.11V	4.98V	5.01V	4.84V	
11	3.9V	5.0V	0.11V	4.98V	3.73V	8.5V	
12	0.08V	0.11V	3.89V	0.11V	0.60V	0.11V	
13	4.9V	4.9V	4.99V	5.0V	0.60V	0.11V	
14	5.0V	5.0V	5.0V	5.0V	5.0V	5.05V	

MOTOR CONTROL BOARD			
PIN NO.	IC1	IC2	IC3
1	0V	0V	5.5V
2	1.53V	0.2V	2.17V
3	1.53V	0.3V	1.8V
4	12.4V	12.4V	2.62V
5	0V	0.2V	1.25V
6	0V	0.2V	1.60V
7	0.3V	0.2V	1.46V
8	+12.0V	+12.0V	2.87V
9			2.24V
10			2.0V
11			3.0V
12			0V(33RPM) 5V(45RPM)
13			0.V
14			5.0V
15			5.0V
16			0V
17			0V
18			5.0V
19			5.0V
20			0V
21			0V
22			0V

Voltages measured with tone arm removed from rest and platter @ 33RPM mode.

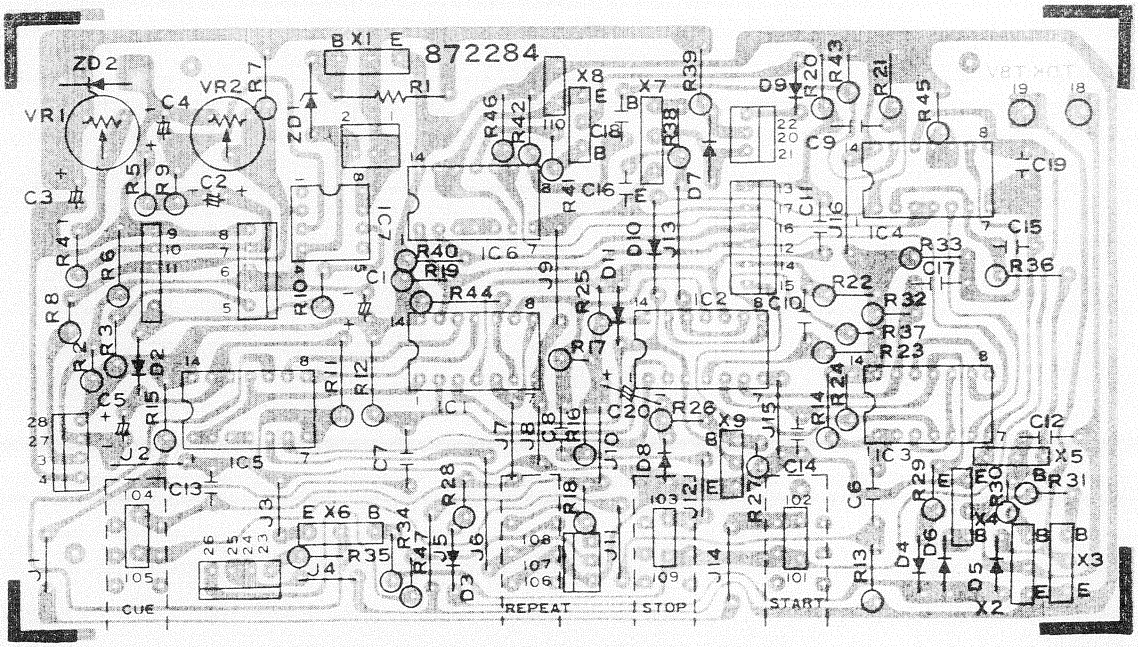
Reference is ground.

MOTOR CONTROL TRANSISTORS

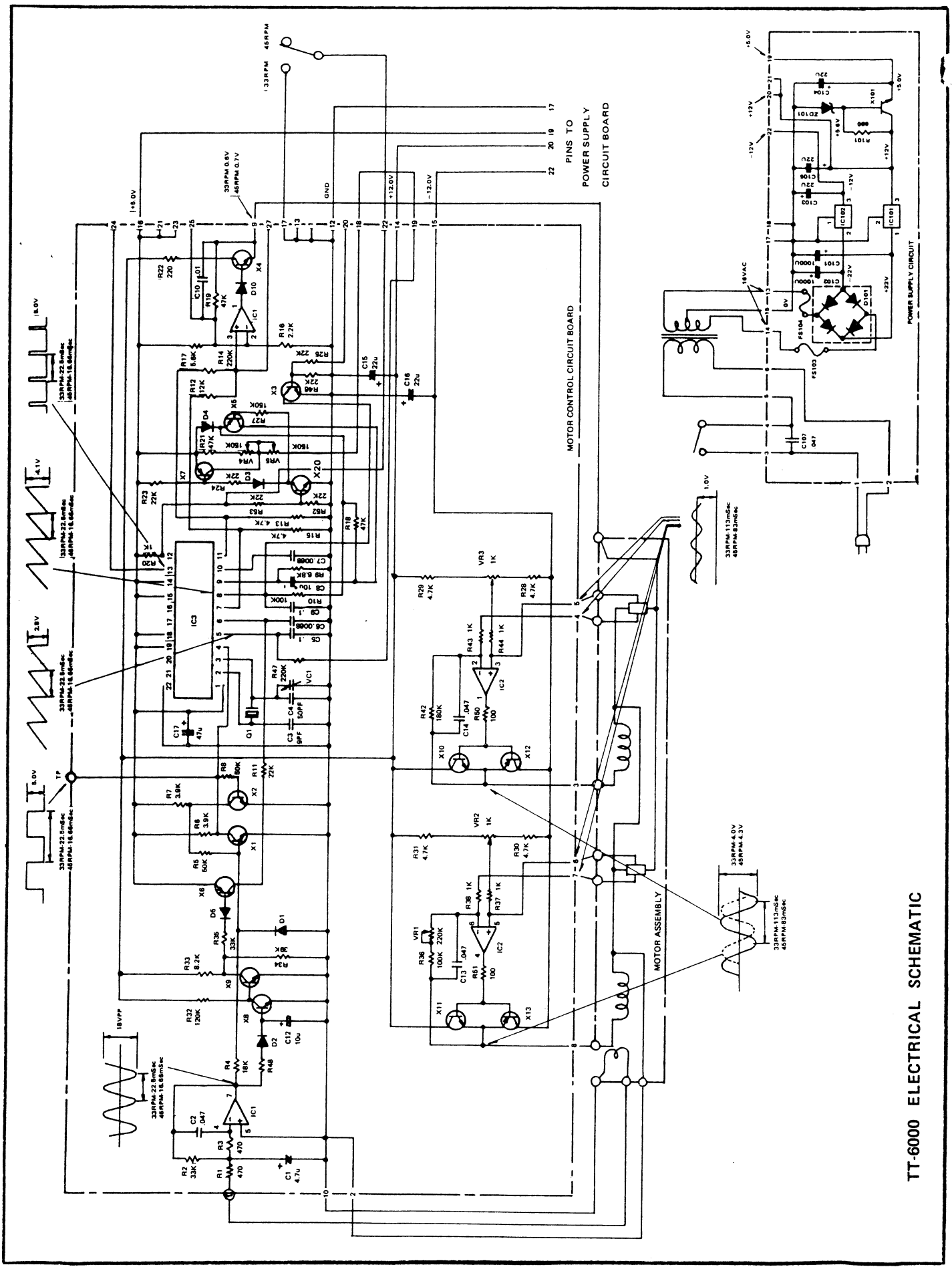
COMPONENT	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	X11	X12	X13	X20
EMITTER	0V	0V	0V	1.0V	6.6V	5.48V	5.49V	0V	0V	1.0V	1.0V	1.0V	1.0V	0V
BASE	.06V	0.4V	0V	1.3V	6.7V	5.6V	5.48V	0.6V	.02V	1.0V	1.0V	1.0V	1.0V	0V
COLLECTOR	2.6V	2.6V	2.9V	11.5V	5.4V	1.98V	4.33V	0.01V	9.72V	11.7V	11.7V	12.4V	12.4V	9.7V

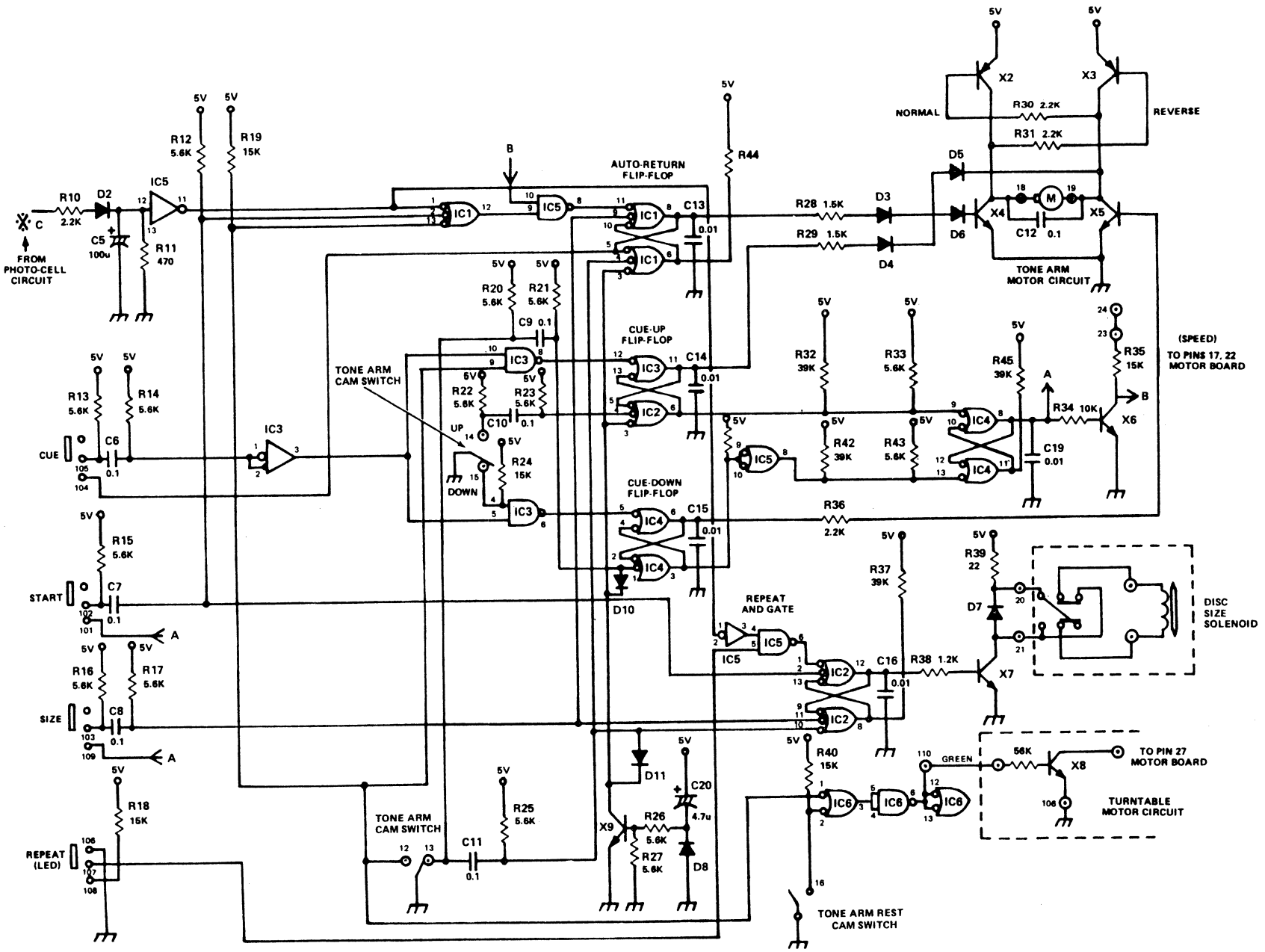
SWITCH LOGIC TRANSISTORS

COMPONENT	X1	X2	X3	X5	X7	X8	X9
EMITTER	5.0V	5.0V	5.0V	0.02V	0.01V	0.01V	0.01V
BASE	5.6V	4.7V	4.7V	0.11V	0.11V	0.11V	0.01V
COLLECTOR	11.75V	4.7V	6.2V	4.8V	11.75V	1.49V	4.74V



SWITCH LOGIC CIRCUIT BOARD


33RPM 45RPM
PINS TO POWER SUPPLY CIRCUIT BOARD
MOTOR CONTROL CIRCUIT BOARD
MOTOR ASSEMBLY
POWER SUPPLY CIRCUIT
GND
+5.0V
+12.0V
-12.0V
16VAC
TT-6000 ELECTRICAL SCHEMATIC



TT-6000 SWITCH LOGIC CIRCUIT SCHEMATIC

SWITCH CIRCUIT DESCRIPTION

START SWITCH FUNCTION

Pushing the start button turns the main motor drive on and the turntable platter starts rotating. After a few seconds of rotation the turntable locks at the correct speed.

Also, this circuit temporarily engages the rotary solenoid and starts the tone-arm motor. The tone-arm cam advances its rotation and engages the gear switch which then completes the rotary solenoid circuit. With the tone-arm motor in operation the tone arm will advance depending on the travel of the rotary cam. When the cam completes its cycle the gear switch is then released which inverts the Flip-Flop circuit that completes the rotary solenoid circuit and stops the tone-arm motor. The main motor still remains on.

REJECT SWITCH FUNCTION

When the reject button is depressed during operation, the tone-arm motor is turned on and locks the gear switch due to cam advancement. The tone-arm returns to its rest, which closes the rest micro-switch, inverting the Flip-Flop circuit, and stops circuit operation.

AUTOMATIC RETURN FUNCTION

The voltage potential between Pins 2 and 3 of Operational Amp. UPC741C determines the potential (Hi or Lo condition) on pin 6 of this amplifier circuit. The reference voltage is Pin 2 and when Pin 3 voltage potential exceeds the reference voltage, Pin 6 goes to high level condition. The speed of the feed arm entering the LED and photo transistor circuit determines Pin 3 voltage increases.

Adjusting VR1 and VR2 determines the correct speed of the tone-arm travel. Normal speed is 1mm pitch but when the record program is over, the disc spiral moves the tone-arm pitch speed at 3mm and increases the potential at Op. Amp Pin 3.

The correct voltage alignment is as follows:

T.P. 9 and 10 (collector-emitter) Photo Xstor
adjust VR1 for 0.2VDC

T.P. 9 and 11 (OP. amp. REF) Pin 2
adjust VR2 for 0.65VDC

The output Pin 6 is differentiated and turns the Flip-Flop circuit on which starts the tone-arm motor returning the arm to its rest and closing the rest switch, stopping circuit operation.

REPEAT SWITCH FUNCTION

Pressing the repeat switch operates an AND circuit which completes the rotary solenoid circuit thus starting the complete circuit cycle over until the repeat switch is disengaged.

MANUAL OPERATION

When the tone arm is removed from the rest, the rest switch is closed starting the turntable motor.

CUEING FUNCTION

CUE UP–

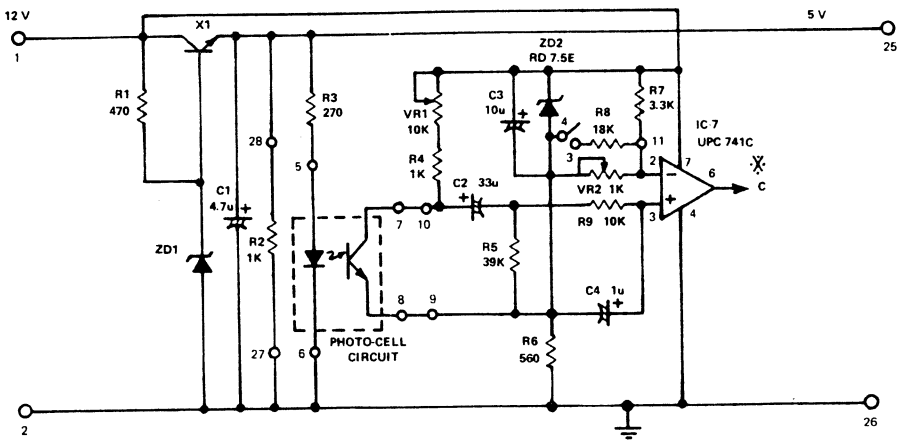
Momentarily depressing the cue switch by passes the gear switch and starts the tone arm motor as well as turning the main platter motor on. The tone-arm cam advances to the lead-in position, this will stop the tone-arm motor because the cueing switch is in the open position. The main motor still remains on so the platter is rotating.

CUE DOWN–

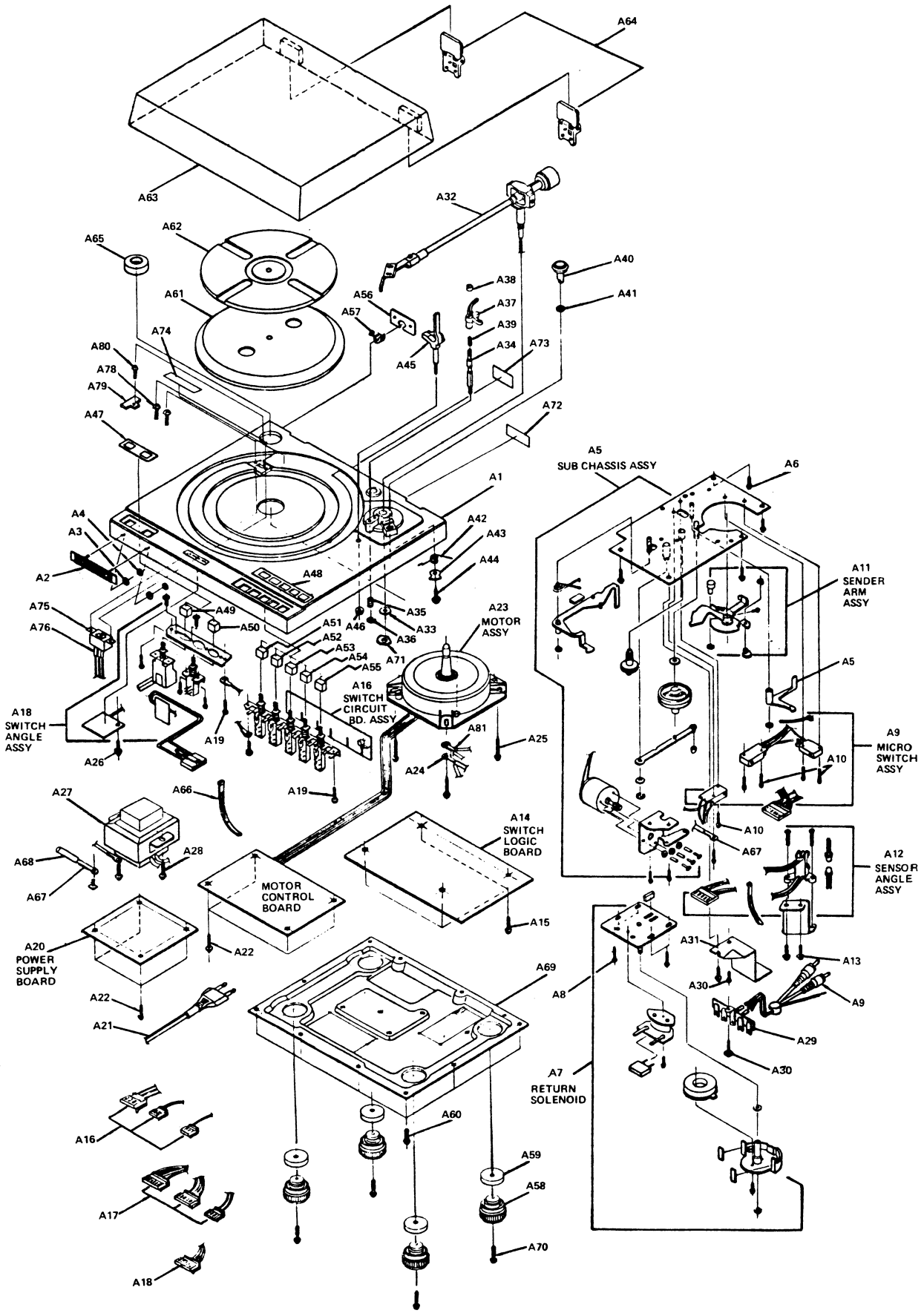
Depressing the cueing button now reverses the tone-arm motor rotation and returns the tone-arm cam until the gear switch is returned to the off position.

NOTE:

In the cue-up mode of operation, start and reject functions cannot be performed due to incomplete tone-arm cam cycle.



AUTOMATIC RETURN CIRCUIT SCHEMATIC



TT-6000 MECHANICAL ASSEMBLY

U UNITED STATE
C CANADA
E EUROPE
T TAIWAN
A AUSTRALIA

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TT-6000

REF DESIG	QUANTITY U	C	E	T	A	PART NUMBER	DESCRIPTION
							TURNTABLE ASSEMBLY
A1	1	1	1	1	1	847525	CHASSIS CASE
A2	1	1	1	1	1	896838	LOGO
A3	2	2	2	2	2	893215	RUBBER BUSHING
A4	2	2	2	2	2	CS-3	CLIP WASHER
A5	1	1	1	1	1	872430-2	SUB-CHASSIS ASSY
A6	5	5	5	5	5	TPT+3X8	SCREW-SELFTAP
A7	1	1	1	1	1	871772-2	RETURN SOLENOID
A8	4	4	4	4	4	TPT+3X8	SCREW-SELFTAP
A9	1	1	1	1	1	899054	MICRO SWITCH ASSY
A10	6	6	6	6	6	FM+26X12	SCREW, PH. RD HD
A11	1	1	1	1	1	896357-4	SEND ARM ASSY
A12	1	1	1	1	1	872182	SENSOR ANGLE ASSY
A13	2	2	2	2	2	TPT+3X8	SCREW, SELF-TAP
A14	1	1	1	1	1	872469	SWITCH LOGIC BOARD ASSY
A15	4	4	4	4	4	BT+3X8	SCREW, SELF-TAP
A16	1	1	1	1	1	872464	SWITCH CIRCUIT BOARD ASSY
A17	1	1	1	1	1	899051	CONNECTOR ASSY
A18	1	1				8724651	SWITCH ANGLE ASSY
A18			1	1	1	8724652	SWITCH ANGLE ASSY
A19	4	4	4	4	4	BT+3X8	SCREW, PH. RD HD
A20	1	1				872424	POWER SUPPLY CIRCUIT ASSY
A20			1			8723381	POWER SUPPLY CIRCUIT ASSY
A20				1	1	872338	POWER SUPPLY CIRCUIT ASSY
A21	1	1				8924351	POWER SUPPLY CORD
A21			1			896824	POWER SUPPLY CORD
A21				1		870913	POWER SUPPLY CORD
A21					1	897336	POWER SUPPLY CORD
A22	4	4	4	4	4	TPT+3X8	SCREW, SELF-TAP
A23	1	1	1	1	1	631790	MOTOR ASSY
A24	1	1	1	1	1	8987011	GROUND WIRE
A25	4	4	4	4	4	TPT+4X12	SCREW, SELF-TAP
A26	5	5	5	5	5	TPT+3X18	SCREW, SELF-TAP
A27	1	1				872403	POWER TRANSFORMER
A27			1			872405	POWER TRANSFORMER
A27				1	1	872404	POWER TRANSFORMER
A28	2	2	2	2	2	TPT+4X12	SCREW, PHILIPS
A29	1	1	1	1	1	896843	5 PIN LUG TERMINAL
A30	2	2	2	2	2	TPT+3X8	SCREW, PHILIPS
A31	1	1	1	1	1	8983441	SHIELD PLATE
A32	1	1	1	1	1	851995	TONE ARM ASSY
A33	1	1	1	1	1	FW10X22X1	STAR WASHER
A34	1	1	1	1	1	8962672	ELEVATION SHAFT
A35	1	1	1	1	1	896377	ELEVATION SPRING
A36	1	1	1	1	1	E3	E-RING, 3mm
A37	1	1	1	1	1	896269	ELEVATION PLATE
A38	1	1	1	1	1	896268	ELEVATION NUT
A39	1	1	1	1	1	287680	CAM SPRING
A40	1	1	1	1	1	898332	ANTI-SKATE KNOB
A41	1	1	1	1	1	897554	SPRING WASHER
A42	1	1	1	1	1	899207	ANTI-SKATE SPRING
A43	1	1	1	1	1	897547	ANTI-SKATE CAM
A44	1	1	1	1	1	TPT+3X8	SCREW, SELF-TAP
A45	1	1	1	1	1	897822	TONE ARM REST ASSY
A46	1	1	1	1	1	FLIN3	FLANGE NUT
A47	1	1	1	1	1	8983362	SPEED OVERLAY
A48	1	1	1	1	1	898916	FUNCTION OVERLAY
A49	1	1	1	1	1	8985284	POWER BUTTON
A50	1	1	1	1	1	898528	SPEED BUTTON
A51	1	1	1	1	1	8985285	SIZE BUTTON
A52	1	1	1	1	1	8985286	REPEAT BUTTON
A53	1	1	1	1	1	8985281	REJECT BUTTON
A54	1	1	1	1	1	8985287	START BUTTON
A55	1	1	1	1	1	8985288	CUE BUTTON
A56	1	1	1	1	1	8930373	CORD MOUNT PLATE
A57	1					8915980	CORD, BUSHING
A57		1				896518	CORD, BUSHING
A57			1			8915983	CORD, BUSHING
A57				1		8915683	CORD, BUSHING
A57					1	8915684	CORD. BUSHING
A58	4	4	4	4	4	8963871	FEET, ABSORBTION
A59	4	4	4	4	4	898919	PLATE, FEET
A60	4	4	4	4	4	BT+4X12	SCREW, PHILIPS
A61	1	1	1	1	1	620061	TURNTABLE PLATTER
A62	1	1	1	1	1	872283	RUBBER MAT ASSY
A63	1	1	1	1	1	8518881	DUST COVER ASSY
A64	2	2	2	2	2	898532	HINGE ASSY
A65	1	1	1	1	1	898340	ADAPTOR, 45RPM
A66	7	7	7	7	7	894408	WIRE FASTENER
A67	4	4	4	4	4	890755	LUG, TERMINAL
A68	4	4	4	4	4	UL3X50L	INSULATION TUBE
A69	1	1	1	1	1	847526	BOTTOM LID
A70	4	4	4	4	4	899231	SCREW, FOOT
A71	1	1	1	1	1	M10	NUT, M-10, TONE ARM
A72	1	1	1	1	1	893389	CAUTION LABEL
A73	1					898918	RATING LABEL
A73		1				8989181	RATING LABEL
A73			1			8989182	RATING LABEL
A73				1		8989183	RATING LABEL
A73					1	8989184	RATING LABEL
A74	1					8947833	FUSE CAUTION
A75			1			8965441	SWITCH, 220VAC
A76			3			7022333	SHEET INSULATION
A78			2			FM+3X8	SCREW, PHILIPS
A79			1			891799	VOLTS PLATE
A80			1			BT+3X8	SCREW, PHILIPS
A81	1	1	1	1	1	899264	GROUND WIRE
							SWITCH LOGIC BOARD ASSY
A14	1	1	1	1	1	872284	CIRCUIT BOARD
							SEMI-CONDUCTORS
IC1-6	6	6	6	6	6	HD7410	INTEGRATED CIRCUIT SN7400TI
IC7	1	1	1	1	1	UPC741C	INTEGRATED CIRCUIT
X1	1	1	1	1	1	2SC1061	TRANSISTOR, 2SC1061C, D
X2, 3	2	2	2	2	2	2SA952	TRANSISTOR. 2SA952L, K
X4, 5, 7	3	3	3	3	3	2SC2001	TRANSISTOR, 2SC2001L, K
X6, 9	2	2	2	2	2	2SC945	TRANSISTOR, 2SC945P, Q, K
D2-6. 8, 10, 11	8	8	8	8	8	IS953	DIODE, IS953
D7	1	1	1	1	1	F14C	DIODE, W038
ZD1	1	1	1	1	1	HZ6A-3L	ZENER DIODE
ZD2	1	1	1	1	1	HD75E (C)	ZENER DIODE
							RESISTORS
							ALL RESISTORS ¼ WATT CARBON FILM UNLESS NOTED
VR1	1	1	1	1	1	SR2-10K0-B	POT, TRIMMER, 10K ohm
VR2	1	1	1	1	1	SR2-01K0-B	POT, TRIMMER, 1K ohm
R1	1	1	1	1	1	SR1-0470-104	RESISTOR, 4700 ohm
R2, 4	2	2	2	2	2	SR1-01K0-104	RESISTOR, 1K ohm
R3	1	1	1	1	1	SR1-0270-104	RESISTOR, 270 ohm
R5, 32, 37	3	3	3	3	3	SR1-39K0-104	RESISTOR, 39K ohm
R42-46	5	5	5	5	5	SR1-39K0-104	RESISTOR, 39K ohm
R6	1	1	1	1	1	SR1-0560-104	RESISTOR, 560 ohm
R7	1	1	1	1	1	SR1-33K1-104	RESISTOR. 3.3K ohm
R8, 38	2	2	2	2	2	SR1-12K1-104	RESISTOR, 1.2K ohm
R9, 34	2	2	2	2	2	SR1-10K0-104	RESISTOR, 10K ohm
R12-17	6	6	6	6	6	SR1-56K1-104	RESISTOR, 5.6K ohm
R20-23	4	4	4	4	4	SR1-56K1-104	RESISTOR, 5.6K ohm
R25-27	3	3	3	3	3	SR1-56K1-104	RESISTOR, 5.6K ohm
R33, 43	2	2	2	2	2	SR1-56K1-104	RESISTOR, 5.6K ohm
R11	1	1	1	1	1	SR1-0470-104	RESISTOR, 470 ohm
R18-19	2	2	2	2	2	SR1-15K0-104	RESISTOR, 16K ohm
R24, 40	2	2	2	2	2	SR1-15K0-104	RESISTOR, 15K ohm
R28-29	2	2	2	2	2	SR1-15K1-104	RESISTOR, 1.5K ohm
R39	1	1	1	1	1	SR1-0022-104	RESISTOR, 22 ohm
							CAPACITORS
C1	1	1	1	1	1	SC1-47M0-25V	ELECTRO., 47UF-25V
C2	1	1	1	1	1	SC1-33M0-16V	ELECTRO., 33UF-16V ± 20%
C3	1	1	1	1	1	SC1-10M0-16V	ELECTRO., 10UF-16V
C4	1	1	1	1	1	SC1-01M0-16V	ELECTRO., 1UF-16V
C5	1	1	1	1	1	SC1-100M-16V	ELECTRO., 100UF-10-16V
C20	1	1	1	1	1	SC1-47M1-16V	ELECTRO., 4.7UF-10-16V
C6-12	7	7	7	7	7	SC2-01M1-50V	POLYFILM, 0.1UF-50V
C17-18	2	2	2	2	2	SC2-01M1-50V	POLYFILM, 0.1UF-50V
C13-15	3	3	3	3	3	SC3-01M2-50V	CERAMIC, 0.01UF-50V
C16, 19	2	2	2	2	2	SC3-01M2-50V	CERAMIC, 0.01UF-50V

U UNITED STATES
C CANADA
E EUROPE
T TAIWAN
A AUSTRALIA

marantz

TT-6000

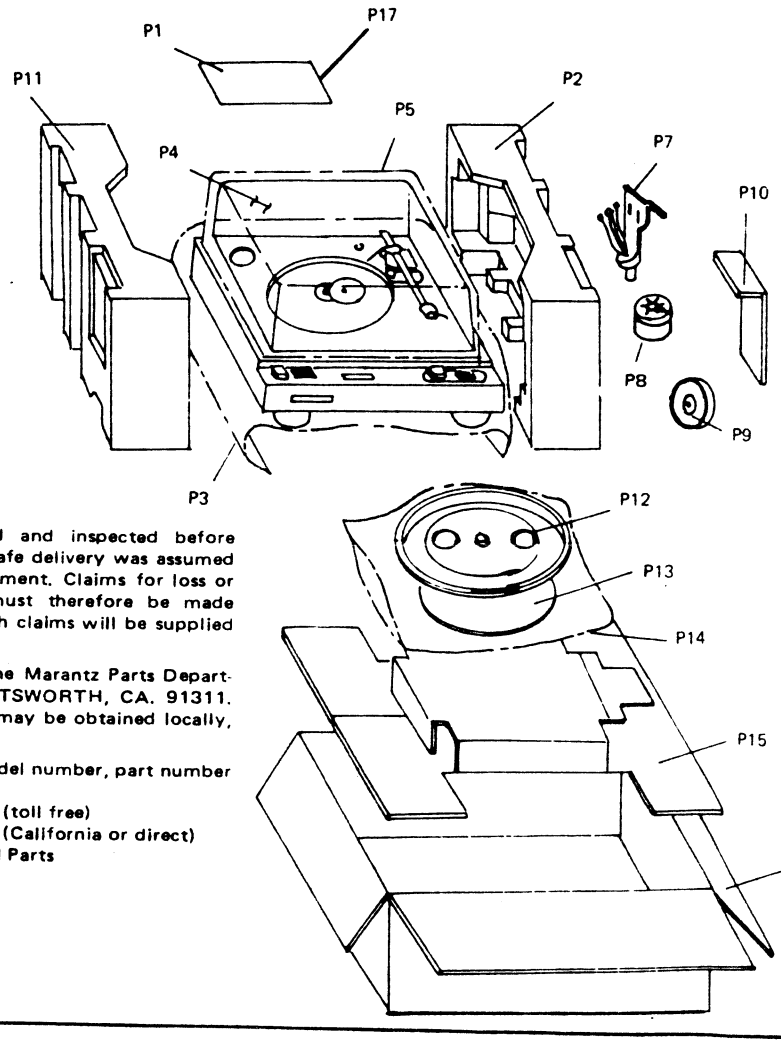
REF DESIG	QUANTITY U	C	E	T	A	PART NUMBER	DESCRIPTION
							POWER SUPPLY BOARD ASSEMBLY
						872364-1	PCB CIRCUIT BOARD
							SEMI-CONDUCTORS
X101	1	1				2SC945	TRANSISTOR, 2SC945P, Q, K
ZD101	1	1				RD5.6EB	ZENER DIODE[
D101	1	1				RB151	DIODE
IC101	1	1				UPC14312H	OPERATIONAL AMP
	1	1				704892	HEAT SINK IC-2425-ST
	4	4				FM+3X6	SCREW, PH. RD. HD.
IC102	1	1				FS7912M	INTEGRATED CIRCUIT, UA79M12C
							CAPACITORS
C101-102	2	2				SC1-1000-25V	ELECTRO, 1000UF-25V
C103-105	3	3				SC1-22M0-25V	ELECTRO, 22UF-25V
C106	1	1				896960	CERAMIC, 0.047UF-125WV
	4	4				8933951	FUSE HOLDER, 6mm
	1	1				7043952	FUSE 1A-250V
							PACKING MATERIALS
P1	1	1				899-130	INSTRUCTION MANUAL
P2	1	1	1	1	1	851996L	END CAP
P3	1	1	1	1	1	500X550X05	POLY BAG
P4	1	1	1	1	1	3518881	DUST COVER
P5	1	1	1	1	1	891264-1	POLY SHEET
P6	1	1	1	1	1	(REFERENCE)	TT-6000 TURNTABLE
P7	1	1	1	1	1	HDSHLL001	HEAD SHELL
P8	1	1	1	1	1	CGWT000060	COUNTER WEIGHT
P9	1	1	1	1	1	898340	45 RPM ADAPTOR
P10	1	1	1	1	1	851834B	PARTS PAD
P11	1	1	1	1	1	851996R	END CAP
P12	1	1	1	1	1	820061	TURNTABLE PLATTER
P13	1	1	1	1	1	872283	PLATTER MAT
P14	1	1	1	1	1	340X570X03	POLY BAG
P15	1	1	1	1	1	851834A	LOWER PAD
P16	1	1	1	1	1	851-994	CARTON
P17	1	1	1	1	1	872-363	PACKAGING INSTRUCTIONS

REF DESIG	QUANTITY U	C	E	T	A	PART NUMBER	DESCRIPTION
							FUNCTION SWITCH ASSY
1	1	1				8990591	POWER SWITCH ASSY
1			1	1	1	8990592	POWER SWITCH ASSY
2	1	1	1	1	1	872458B	SWITCH CIRCUIT BOARD
3	1	1	1	1	1	899050	CONNECTOR ASSY
4	1	1	1	1	1	8985581	LED CIRCUIT BOARD
5	1	1	1	1	1	899052	CONNECTOR ASSY
6	1	1	1	1	1	898036	SWITCH ANGLE
7	1	1	1	1	1	899019	PUSH SWITCH
8	2	2	2	2	2	BT+3X6	SCREW, CHANGE OVER SWITCH
9	2	2	2	2	2	FM+3X6	SCREW, POWER SWITCH
							LED BOARD ASSY
3	1	1	1	1	1	898288	CIRCUIT BOARD
2	1	1	1	1	1	SR1-0470-104	RESISTOR, CARBON 470 ohm
1	1	1	1	1	1	898557	L.E.D.
							FUNCTION SWITCH BOARD ASSY
F1	1	1	1	1	1	872458-1	SWITCHING BOARD
F2	1	1	1	1	1	899020	PUSH SWITCH ASSY (SUF 51)
F3	1	1	1	1	1	899048	CONNECTOR ASSY
F6	1	1	1	1	1	899049	CONNECTOR ASSY
F10	1	1	1	1	1	899047	CONNECTOR ASSY
F13	1	1	1	1	1	2SC945	TRANSISTOR, 2SC945 P, Q, K
F14	1	1	1	1	1	SR1-56K0-104	RESISTOR, CARBON 56K - ¼W
							FINAL ASSEMBLY
FA1	1	1	1	1	1	847525	CABINET CASE
FA2	1	1	1	1	1	851888-1	DUST COVER
FA3	1	1	1	1	1	847526	BOTTOM LID
FA4	1	1	1	1	1	896387	INSULATOR ASSY
FA5	1	1	1	1	1	891995	TONE ARM ASSY
FA6	1	1	1	1	1	897882	TONE ARM REST
FA7	1	1	1	1	1	898332	ANTI-SKATE KNOB
FA8	1	1	1	1	1	896269	CUE ELEVATOR
FA9	1	1	1	1	1	871474-2	PHONO OUTPUT CABLE
FA10	1	1				892435-1	POWER SUPPLY CORD
FA10			1			896824	POWER SUPPLY CORD
FA10				1		870913	POWER SUPPLY CORD
FA10					1	897336	POWER SUPPLY CORD
FA11	1	1	1	1	1	898916	FUNCTION SWITCH OVERLAY
FA12	1	1	1	1	1	896838	LOGO
FA13	1	1	1	1	1	898336-2	SPEED OVERLAY
FA14	1	1	1	1	1	898528-4	PUSH BUTTON, POWER
FA15	1	1	1	1	1	898528	PUSH BUTTON, SPEED
FA16	1	1	1	1	1	898528-5	PUSH BUTTON, SIZE
FA17	1	1	1	1	1	898528-6	PUSH BUTTON, REPEAT
FA18	1	1	1	1	1	898528-1	PUSH BUTTON, REJECT
FA19	1	1	1	1	1	898528-7	PUSH BUTTON, START
FA20	1	1	1	1	1	898528-8	PUSH BUTTON, CUE
FA21	1	1	1	1	1	620061	TURNTABLE PLATTER
FA22	1	1	1	1	1	872283	RUBBER MAT
FA23	1	1	1	1	1	898340	ADAPTOR, 45RPM
FA24	1	1	1	1	1	898532	HINGE ASSY
FA25	1	1				891568-0	CORD SLEEVE BUSHING
FA25			1	1		891568-3	CORD SLEEVE BUSHING
FA25					1	891568-4	CORD SLEEVE BUSHING
FA26	1					898918	I. D. LABEL
FA26		1				898918-1	I. D. LABEL
FA26			1			898918-2	I. D. LABEL
FA26				1		898918-3	I. D. LABEL
FA26					1	898918-4	I. D. LABEL
FA27	1	1	1	1	1	893389	I. D. LABEL
FA28	1					894783-2	FUSE LABEL
FA28		1				895019	FUSE LABEL
FA30	1					894342-1	UL LABEL
FA30		1				893806	CSA LABEL
FA31	1					894480	FACTORY LABEL
FA31		1				8948879	CSA FILE LABEL
FA27			1	1	1	893389	CAUTION LABEL
FA29				1		898970	WARNING LABEL
FA30	1	1	1	1	1	HDSHLL001	HEAD SHELL
FA31	1	1	1	1	1	CGWT000060	COUNTER WEIGHT

TT-6000
TECHNICAL SPECIFICATIONS
GENERAL

Drive System	Direct Drive
Drive Motor Type	Brushless, Slotless, Coreless 8 Pole, 2 Phase
Control Range	Quartz Lock
Rumble (Din B)	-75dB
Wow/Flutter (WRMS)	0.025%
Effective Tone Arm Length	9 in (228mm)
Platter Diameter	12.6in/320mm
Stylus Overhang	0.67 in/17mm
Tracking Force Range	0-4 grams
Anti-Skating Force Range	0-4 grams
Maximum Tracking Error	0.15 deg/cm
Average Tracking Error	0.07 deg/cm
Power Requirement	120V, 60Hz-6 Watts and/or Universal Applications
Dimensions	17 3/8in (441mm) x 5 1/2in (140mm) x 15in (381mm) HxWxD
Weight	14.25lbs (6.5Kg)

PACKING ASSEMBLY



NOTE:

1. This merchandise was thoroughly packed and inspected before leaving our factory. Responsibility for its safe delivery was assumed by the carrier upon acceptance of the shipment. Claims for loss or concealed damage, sustained in transit, must therefore be made upon the carrier. Forms required to file such claims will be supplied by the carrier.
2. Replacement parts may be ordered from the Marantz Parts Department, 20525 NORDHOFF STREET, CHATSWORTH, CA. 91311. ITEMS Such as screws and other hardware may be obtained locally, using the description provided.

When ordering replacement parts, specify model number, part number and description.

For telephone orders, dial: 1-800-423-5108 (toll free)
1-213-998-9333 (California or direct)
Ask for National Parts

TT-6000

marantz®

MARANTZ CO. INC., 20525 NORDHOFF ST., CHATSWORTH, CALIFORNIA 91311

A DIVISION OF SUPERSCOPE INC., CHATSWORTH, CALIFORNIA 91311

LITHO-U.S.A.—FEB. 80

Service Manual Part No. 199-1464-000